


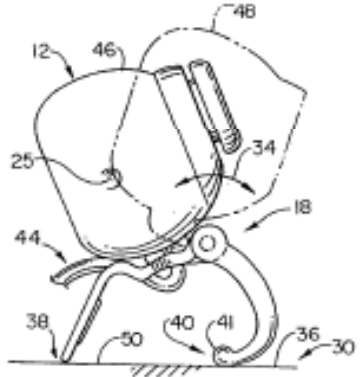
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NO. 6:10-cv-329-LED

PLAINTIFF'S CLAIM CONSTRUCTION TUTORIAL

# U.S. PATENT NO. 5,855,343

## CAMERA CLIP

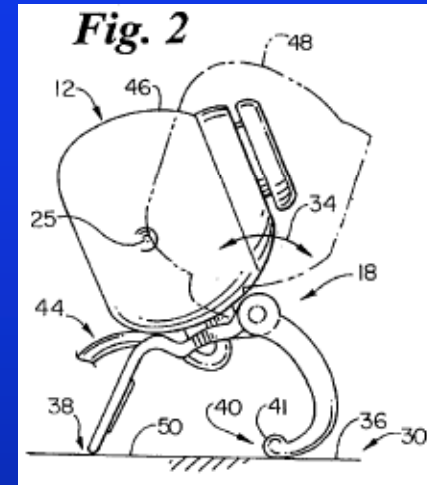
 US005855343A	
<b>United States Patent</b> [19] <b>Krekelberg</b>	[11] <b>Patent Number:</b> <b>5,855,343</b> [45] <b>Date of Patent:</b> <b>Jan. 5, 1999</b>
<p>[54] <b>CAMERA CLIP</b></p> <p>[75] <b>Inventor:</b> David E. Krekelberg, Minnetonka, Minn.</p> <p>[73] <b>Assignee:</b> iREZ Research, Corporation, Minnetonka, Minn.</p> <p>[21] <b>Appl. No.:</b> 814,168</p> <p>[22] <b>Filed:</b> Mar. 7, 1997</p> <p>[51] <b>Int. Cl.<sup>6</sup></b> ..... A47G 29/00</p> <p>[52] <b>U.S. Cl.</b> ..... 248/121; 248/126; 248/918</p> <p>[58] <b>Field of Search</b> ..... 248/121, 126, 248/440.1, 166, 176.1, 688, 918; 224/908; 396/421, 422, 423, 424, 425, 426, 427, 428</p> <p>[56] <b>References Cited</b></p> <p>U.S. PATENT DOCUMENTS</p> <p>1,208,344 12/19/96 McAll ..... 248/126</p>	
<p style="text-align: right;">[57] <b>ABSTRACT</b></p> <p>A clip for supporting a portable camera either on a surface or on an edge of a housing, and for protecting the lens of the camera when the camera is not being supported. The clip provides two axis of rotation to position the camera to any desired viewing angle. The clip may be rotated to a first position to support the camera on a surface of a table or desk. The clip may be rotated to a second position to support the camera on the display screen of a laptop computer. When the camera is not being supported in the first position or the second position, the camera may be rotated to be releasably held by the clip to protect the camera and lens during storage.</p>	
<p>21 Claims, 2 Drawing Sheets</p>	
	

## U.S. PATENT NO. 5,855,343

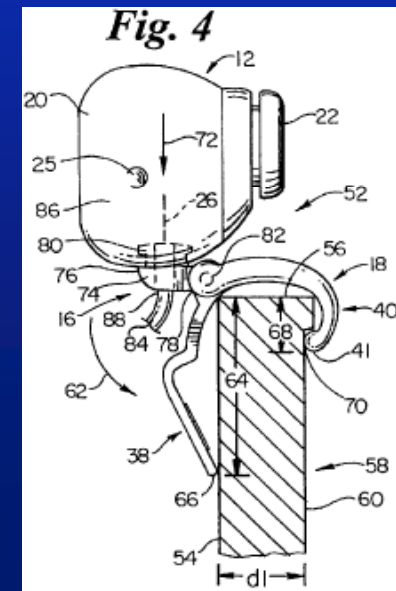
- The '343 patent is entitled "Camera Clip."
- Apparatuses which comprise camera clips are often referred to as "webcams."
- At a high level, the invention of the '343 patent comprises a novel adjustable camera clip comprising one disposition on a generally horizontal, planar surface (for example a table top), and another disposition when, for example, attached to the screen of a laptop computer.

## ‘343 PATENT – EXEMPLARY FIGS. 2 & 4

Exemplary Fig. 2 shows a preferred embodiment webcam in a first disposition on a table top.

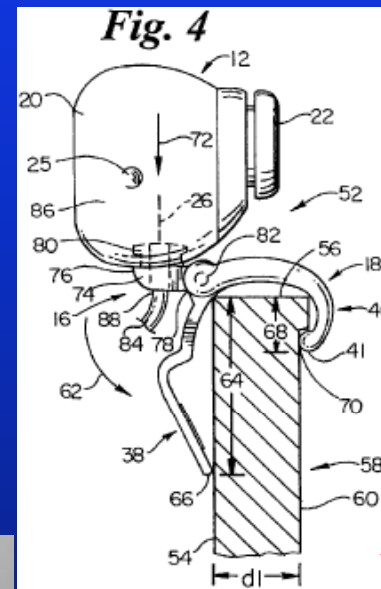
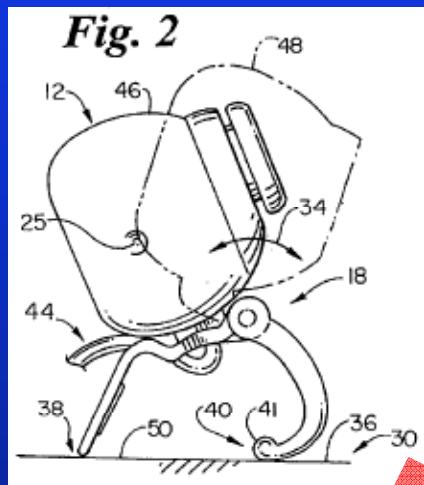


Exemplary Fig. 4 shows the same webcam in a second disposition when (in an exemplary embodiment) attached to the screen of a laptop computer, as follows:



# '343 PATENT

Exemplary commercial webcams:



## ‘343 PATENT

The ‘343 patent has five independent claims, which are claims 1, 10, 19, 20 and 21.

# '343 Patent, Exemplary Claim 1

1. Apparatus for supporting a camera, having a lens, on any generally horizontal, substantially planar surface and on an object having a first surface and a second surface and an edge intersecting the first surface and the second surface, comprising:

- a. a hinge member adapted to be rotatably attached to the camera, said camera, when the hinge member is so attached, rotating, about a first axis of rotation, relative to said hinge member; and
- b. a support frame rotatably attached to said hinge member and configured to support said hinge member on the surface and the object,

said hinge member rotating about a second axis of rotation relative to said support frame,

said first axis of rotation being generally perpendicular to said second axis of rotation,

said second axis of rotation being substantially parallel to the first surface when said hinge member is supported on the object,

said support frame having a first disposition positioned on said generally horizontal, substantially planar surface,

and said support frame having a second disposition attached to the object when said first surface and said second surface are inclined from a generally horizontal orientation,

the camera being maintained adjacent said edge in said second disposition of said support frame.

## Exemplary Claim 1 vis-a-vis an Exemplary Embodiment

### 1. Apparatus for supporting a camera . . . comprising:

a. a **hinge member** adapted to be rotatably attached to the camera, said camera, when the hinge member is so attached, rotating, about a **first axis of rotation**, relative to said hinge member; and

b. a **support frame** rotatably attached to said hinge member and configured to support said hinge member on the **surface** and the **object**,

said **hinge member** rotating about a **second axis of rotation** relative to said **support frame**,

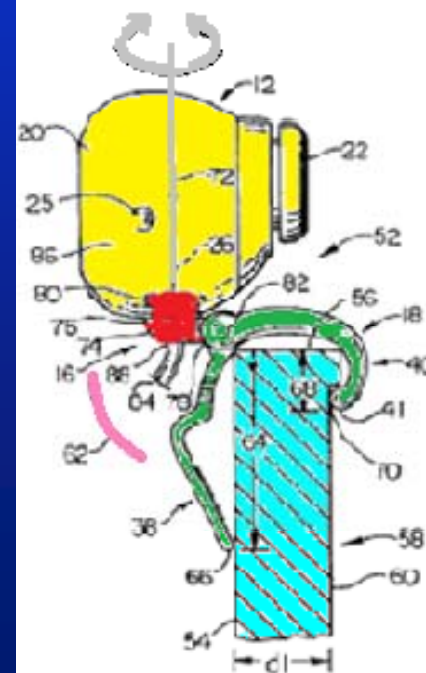
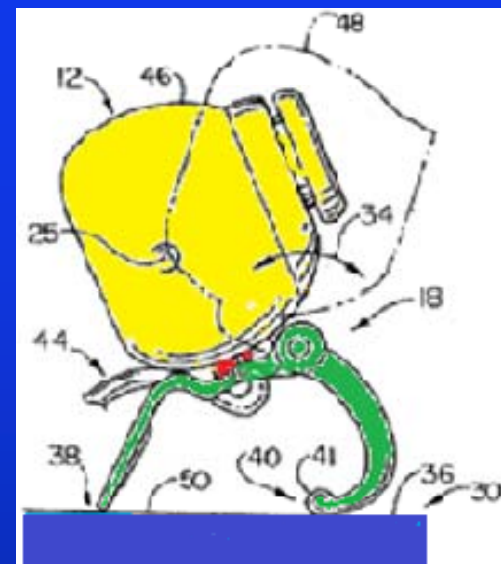
said first axis of rotation being generally perpendicular to said second axis of rotation,

said **second axis of rotation** being substantially parallel to the first surface when said **hinge member** is supported on the **object**,

said support frame having a first disposition positioned on said generally horizontal, substantially planar **surface**, and

said support frame having a second disposition attached to the **object** when said first surface and said second surface are inclined from a generally horizontal orientation,

the **camera** being maintained adjacent said edge in said second disposition of said **support frame**.





## ‘343 Patent, Claims 10, 20 & 21

Independent claim 10 is similar to claim 1, except it comprises additional claim limitations related to the support frame being comprised of “a rear support element and a first and a second front support element. . .”

Independent claim 20 is similar to claim 1, except it comprises additional claim limitations related to “wherein said support frame protects the camera when said hinge member is not supported on the generally horizontal, substantially planar surface . . .”

Independent claim 21 is similar to claim 1, except that it comprises additional claim limitations related to “wherein said support frame releasably holds and protects the camera when said hinge member is not supported by said support frame on the object. . .”

## ‘343 Patent, Claim 19

Independent claim 19 covers a “camera clip for supporting a camera on a laptop computer” . . . comprising . . .

a hinge member adapted to be rotatably attached to the camera, said camera rotating about a first axis of rotation relative to said hinge member; and

a support frame hingedly attached to said hinge . . .

Claims 1, 10, 20 & 21: “support frame *rotatably attached* to said hinge member.. .”

Claim 19: “support frame *hingedly attached* to said hinge member. . .”

# Hinge member: rotatable attachment

Hinge member: a structural element that joins to another for rotation in at least one axis of rotation

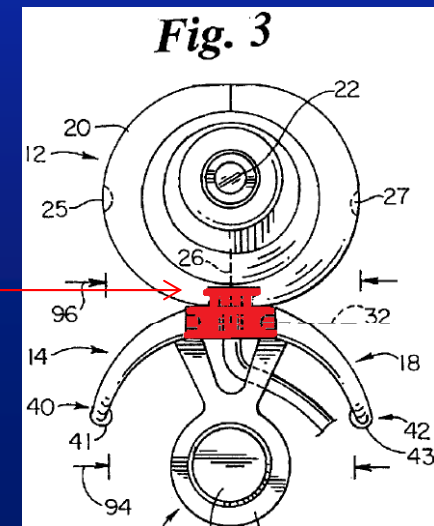
Including structurally, a hinge member comprises: (1) *for rotatable attachment to a camera*; and (2) for rotatable (claims 1, 10, 20 & 21) or hinged (claim 19) attachment to a support frame.

E.g.,

“a hinge member adapted to *be rotatably attached* to the camera” Claims 1, 10, 19, 20 & 21

“Hinge member 16 is *rotatably attached* to camera 12, where camera 12 rotates over a first axis 26 in a direction shown by arrow 28 relative to hinge member 16.” Col. 4, lns. 17-19.

Exemplary embodiment



## Hinge member: rotatable and hinged attachment

**Hinge member:** a structural element that joins to another for rotation in at least one axis of rotation

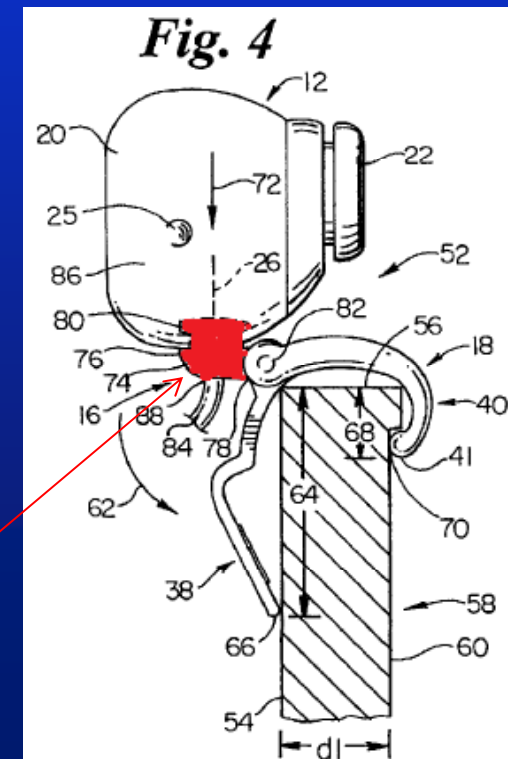
Including structurally, a hinge member comprises: (1) for rotatable attachment to a camera; and (2) *for rotatable (claims 1, 10, 20 & 21) or hinged (claim 19) attachment to a support frame.*

E.g.,

“a support frame *rotatably attached* to said hinge member and configured to support said hinge member on the surface and the object” Claims 1, 10, 20 & 21

“a support frame *hingedly attached* to said hinge member to engagingly support said hinge member on the display screen” Claim 19

“Support frame 18 is *hingedly attached* to hinge member 16 to engagingly support hinge member 16 on an object 30 (see also, FIG. 2). Hinge member 16 rotates over a second axis 32 in the direction shown by arrow 34 relative to support frame 18. .” Col. 4, lns. 120-24



## Exemplary embodiment

# Support Frame: structural support

Support frame: a structural element that supports another structure (e.g., supports a hinge)

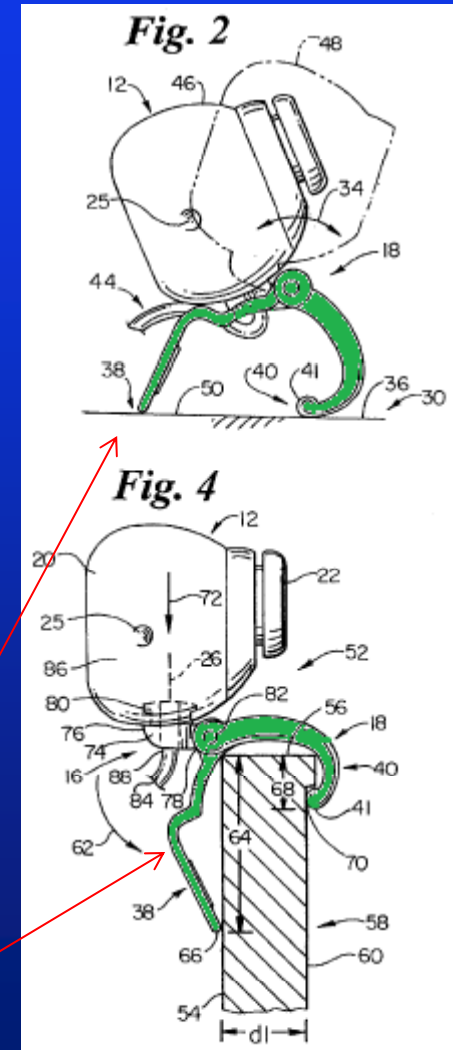
E.g.,

“a **support frame** rotatably attached to said hinge member and configured to **support** said hinge member on the surface and the object” Claims 1, 10, 20 & 21

“a **support frame** hingedly attached to said hinge member to engagingly **support** said hinge member on the display screen” Claim 19

“**Support frame 18** is hingedly attached to hinge member 16 to engagingly **support** hinge member 16 on an object 30 (see also, FIG. 2). Hinge member 16 rotates over a second axis 32 in the direction shown by arrow 34 relative to support frame 18. .” Col. 4, lns. 20-24.

“**Support frame 18** has a first portion consisting of first support element 38 and a second portion consisting of a first front **support** element 40 and a second front support element 42.” Col.; 4, lns. 27-30.



# Maintained adjacent said edge

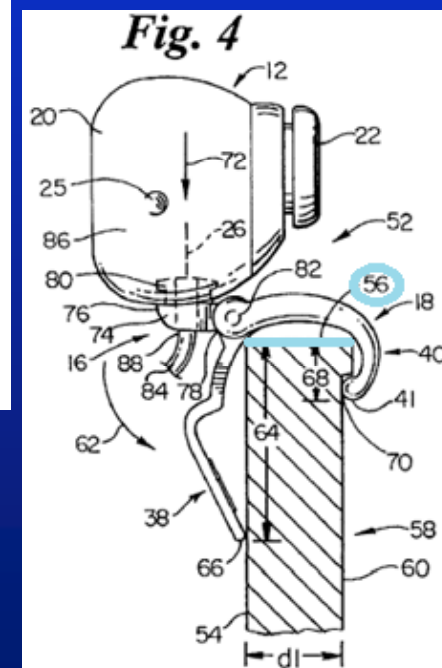
Claim 1: Apparatus for supporting a camera, having a lens, on any generally horizontal, substantially planar surface and on an object having a first surface and a second surface and an edge intersecting the first surface and the second surface, comprising: . . . the camera being maintained adjacent said edge in said second disposition of said support frame. . . .”

Claim 19: A camera clip for supporting a camera on a laptop computer, the laptop computer having a display screen which can be inclined from a generally horizontal position, an uppermost portion of the display screen defining an edge, comprising: . . . the camera being maintained adjacent the edge. . . .”

Claim 21: Apparatus for supporting a camera, having a lens, on an object having a first surface and a second surface, wherein a thickness measured between the first surface and the second surface defines an edge therebetween, comprising: . . . the camera being maintained adjacent the edge. . . .”

FIG. 4 is a side view showing a second mode of the preferred embodiment of the present invention. The second mode occurs when rear support element 38, first front support element 40 and second front support element 42 support camera 12 in a second position 52 on a first surface 54 adjacent an edge 56. Col. 5, lns. 1-6.

Exemplary embodiment:



# Display screen which can be inclined from a generally horizontal position

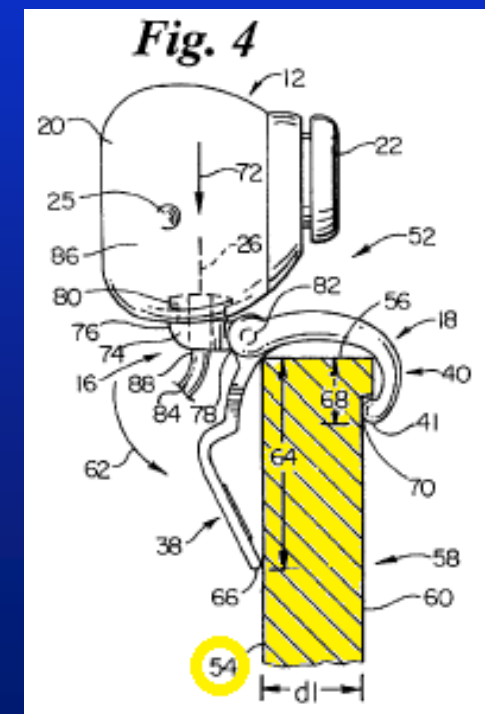
19. A camera clip for supporting a camera on a laptop computer, the laptop computer having a display screen which can be inclined from a generally horizontal position, an uppermost portion of the display screen defining an edge, comprising:

a. a hinge member adapted to be rotatably attached to the camera, said camera rotating about a first axis of rotation relative to said hinge member; and

b. a support frame hingedly attached to said hinge member to engagingly support said hinge member on the display screen . . .

FIG. 4 is a side view showing a second mode of the preferred embodiment of the present invention. The second mode occurs when rear support element 38, first front support element 40 and second front support element 42 support camera 12 in a second position 52 on a first surface 54 adjacent an edge 56. Second position 52 corresponds to first surface 54 being inclined from the substantially level position. . . Col. 5, lns. 1-8.

## Exemplary embodiment:



# Display screen which can be inclined from a generally horizontal position

Exemplary embodiment:



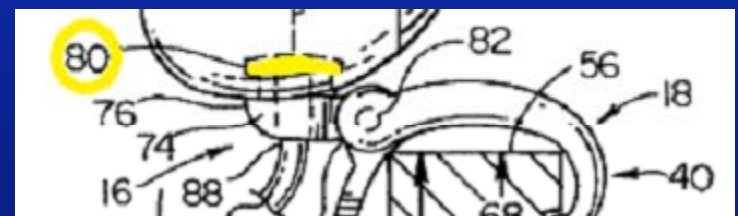
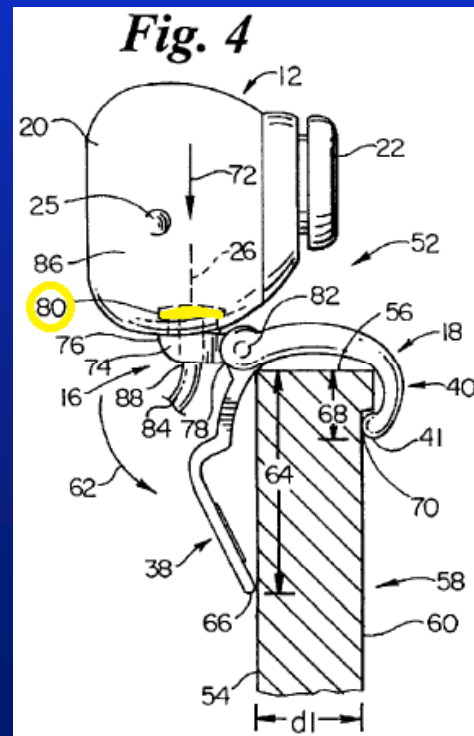


# Pivot Element

8. Apparatus according to claim 1 wherein the hinge member includes a body having a proximal and a distal end, a **pivot element** at said proximal end of said body adapted to rotatably attach the camera to the body so that the camera rotates about the first axis relative to the body . . .

FIG. 4 shows hinge member 16 comprised of a body 74 having a proximal end 76 and a distal end 78. A **pivot element** 80 at proximal end 76 of body 74 rotatably attaches camera 12 to body 74 so the camera may rotate about first axis 26 relative to body 74. Col. 5, lns. 37-41.

Exemplary embodiment:



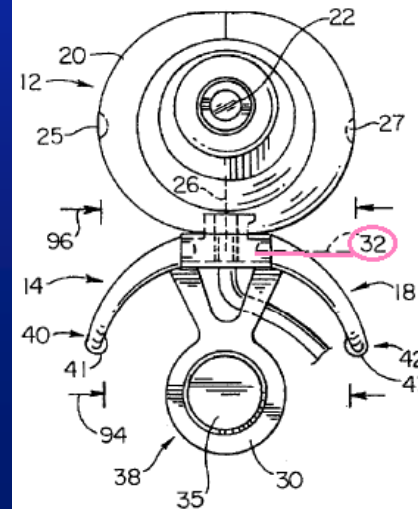
## Rotation of said support frame being prevented along an axis substantially parallel to said second axis

19. A camera clip for supporting a camera on a laptop computer, the laptop computer having a display screen which can be inclined from a generally horizontal position, an uppermost portion of the display screen defining an edge, comprising:

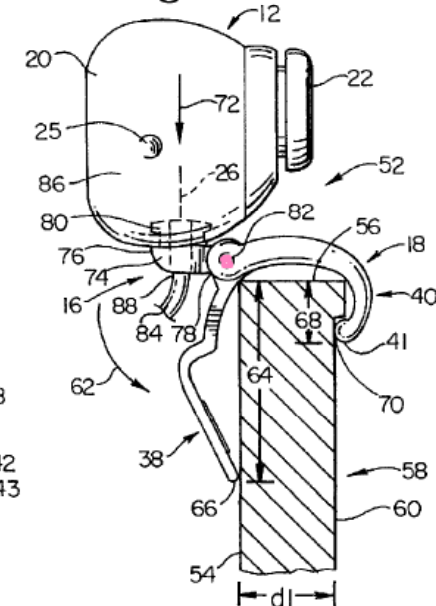
- a. a hinge member adapted to be rotatably attached to the camera, said camera rotating about a first axis of rotation relative to said hinge member; and
- b. a support frame hingedly attached to said hinge member to engagingly support said hinge member on the display screen, said hinge member rotating over a **second axis** of rotation relative to said support frame, the camera being maintained adjacent the edge, **rotation of said support frame being prevented along an axis substantially parallel to said second axis** where said second axis is substantially parallel to said edge.

Rear support element 38, first front support element 40 and second front support element 42, in combination, maintain camera 12 adjacent edge 56 and **prevent rotation of support frame 18 along an axis substantially parallel to second axis 32**, where second axis 32 is substantially parallel to edge 56. Col. 5, lns. 15-20.

**Fig. 3**



**Fig. 4**



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